Higher Education Enrollment and Projections

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Presentation to the Washington Learns
Higher Education Advisory Committee

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OFM Enrollment & Participation Rate Projections

OFM Participation Rate Projections

- Statutory Requirements: RCW 43.62.050 and RCW 28B.10.784 direct OFM to develop population-based student enrollment projections for Washington public higher education institutions.

- OFM applies “current participation rates” in public higher education to the OFM population forecast to obtain projected enrollments.

- Single year of age participation rates are applied to single year of age population forecasts to obtain projected enrollments.

How Are Participation Rates Used in Projecting Enrollment?

Participation Rate = The number of persons of a particular age enrolled in higher education as a percent of all persons of that age.

Example: Calculating the Participation Rate of 20-year-olds in Public Four-Year Higher Education, Fall 2004

$$\frac{\text{Number of 20-year-olds in public four-year system}}{\text{Number of 20-year-olds in population}} = \frac{12{,}959}{88{,}404} = 14.66\%$$

Example: Projecting the Number of 20-year-olds Enrolled in Public Four-Year Higher Education, Fall 2020

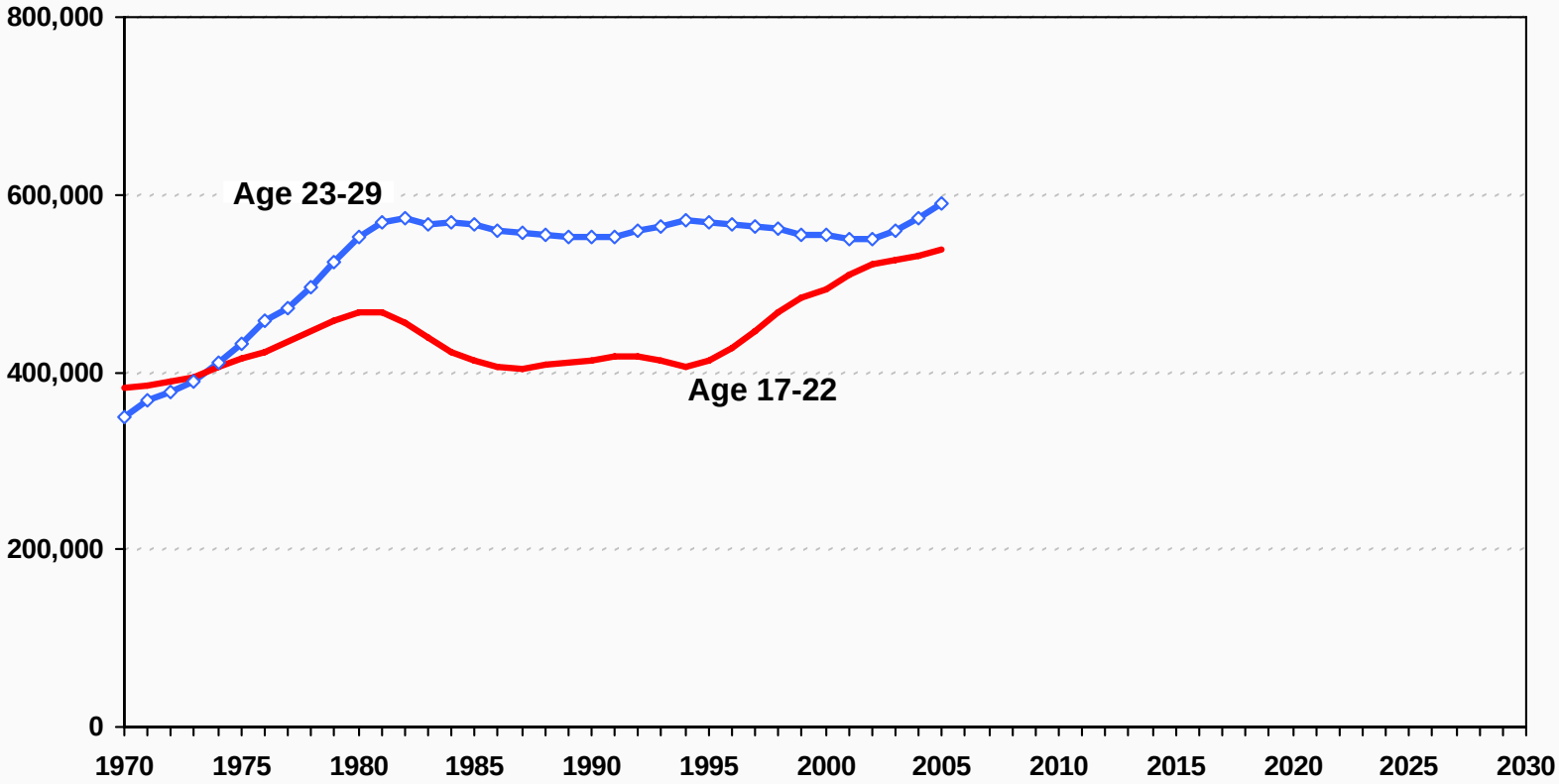
Projected number of 20-year-olds in population in 2020 x Current (Fall 2004) Participation Rate = 93,913 x 14.66% = 13,768

Limitations of Participation Rate Projections

- They are not projections of the need or demand for higher education in the future – they only indicate what enrollment levels would be in the future if current participation rates were maintained.
- They reflect current access policies.
- They reflect the current distribution of students between the two- and four-year systems, and among lower, upper, and graduate/professional levels.
- They are based on long-term population forecasts which can be off between 10 and 15 percent on either the low or high side.
- On the other hand, they are useful for establishing a "maintenance level" budget perspective on enrollment.

Prime College-Age Population Trends

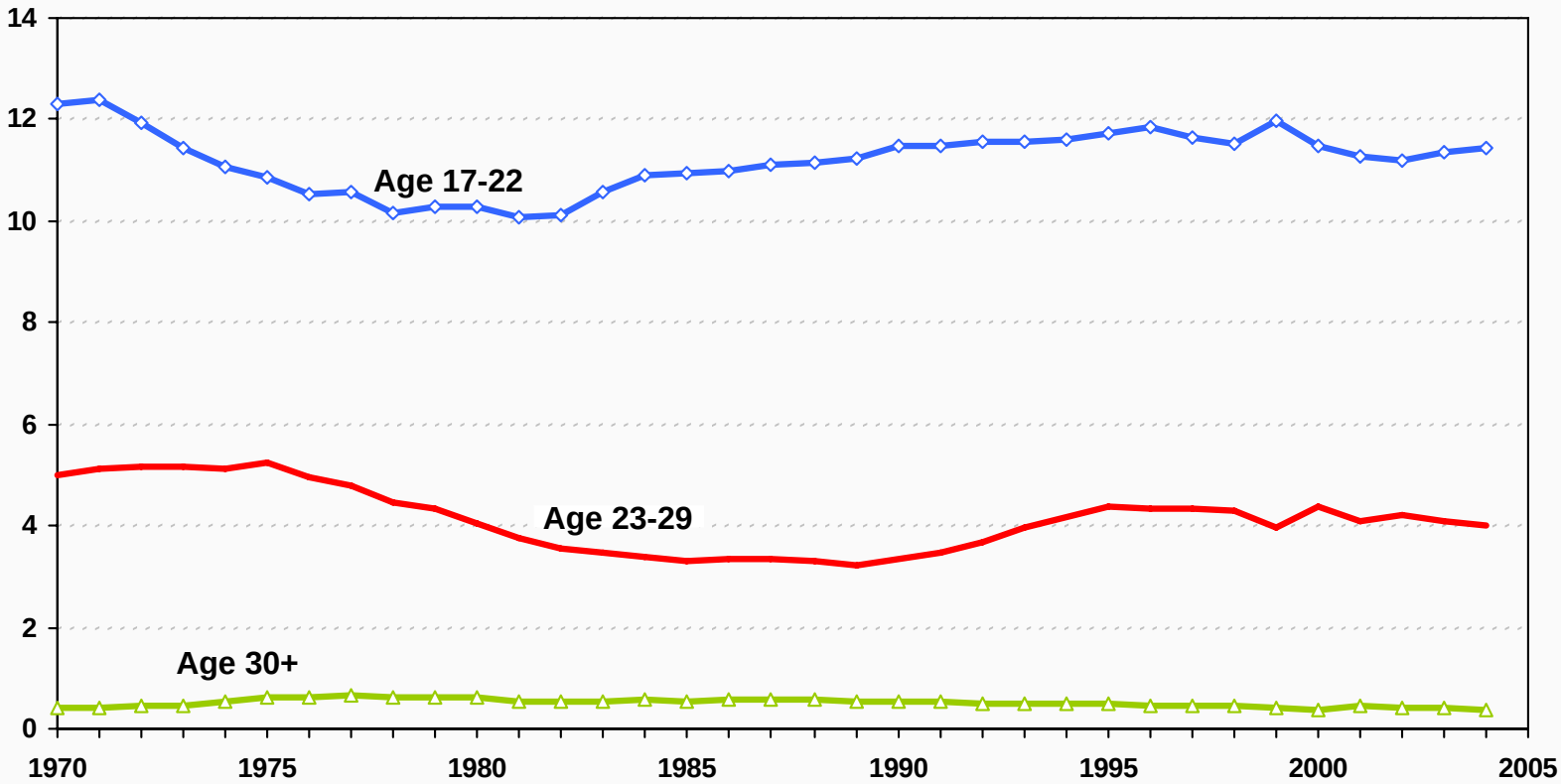
From the mid-1980s to the late 1990s, the age 17- to 22-year-old population stayed relatively flat. The "baby boom echo" became part of the prime college age population starting in about 1995.



Source: OFM Forecast of the State Population. http://www.ofm.wa.gov/pop/stfc/

Participation Rates by Age Group: Public Four-Year Institutions

Fall Headcount Enrollment

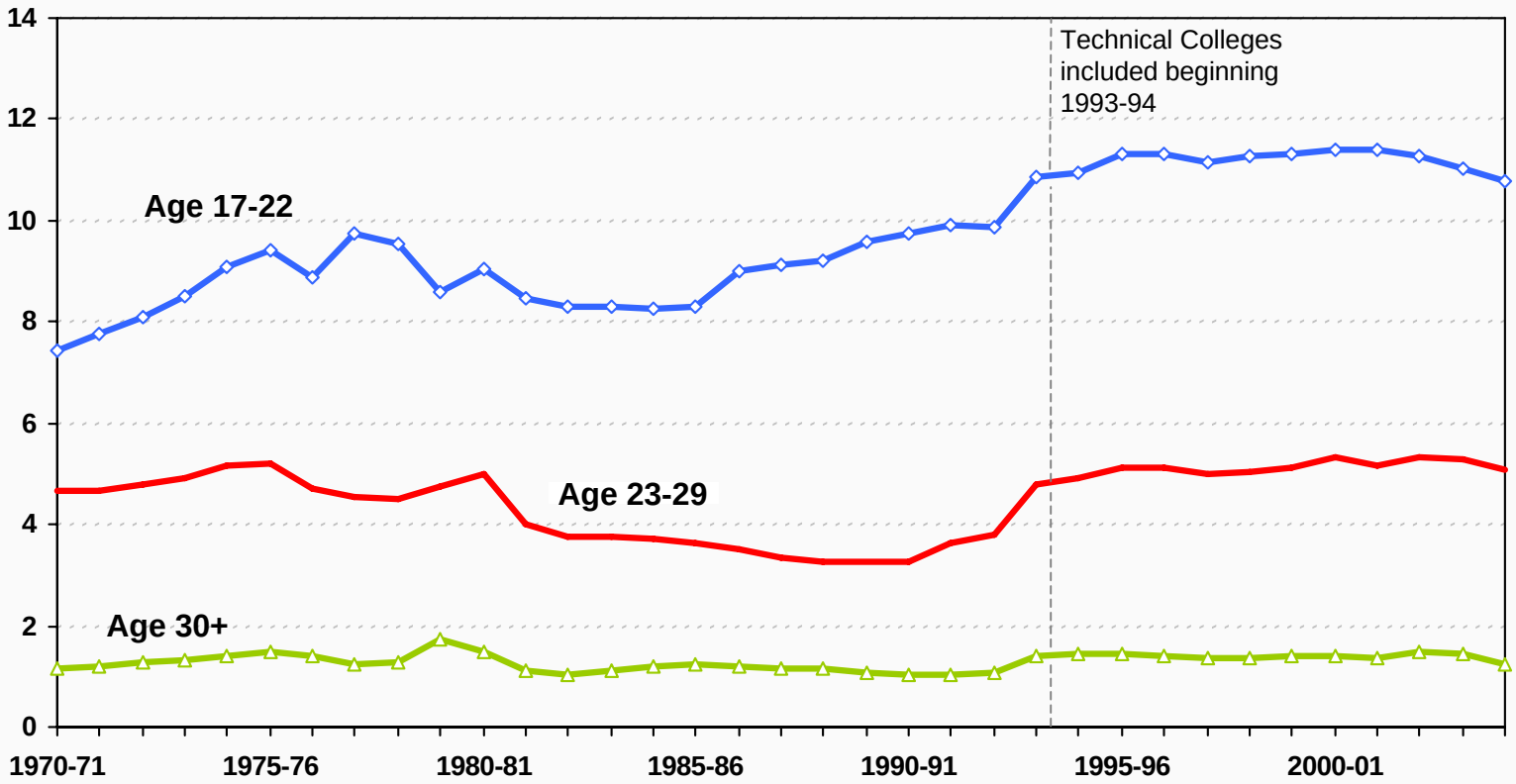


Sources: OFM Public Centralized Higher Education Enrollment System (PCHEES) and U.S. Census Bureau and OFM (population).

Public Four-Year participation rates are based on Fall headcount enrollment.

Participation Rates by Age Group: Community and Technical Colleges

Annual Average FTE Enrollment

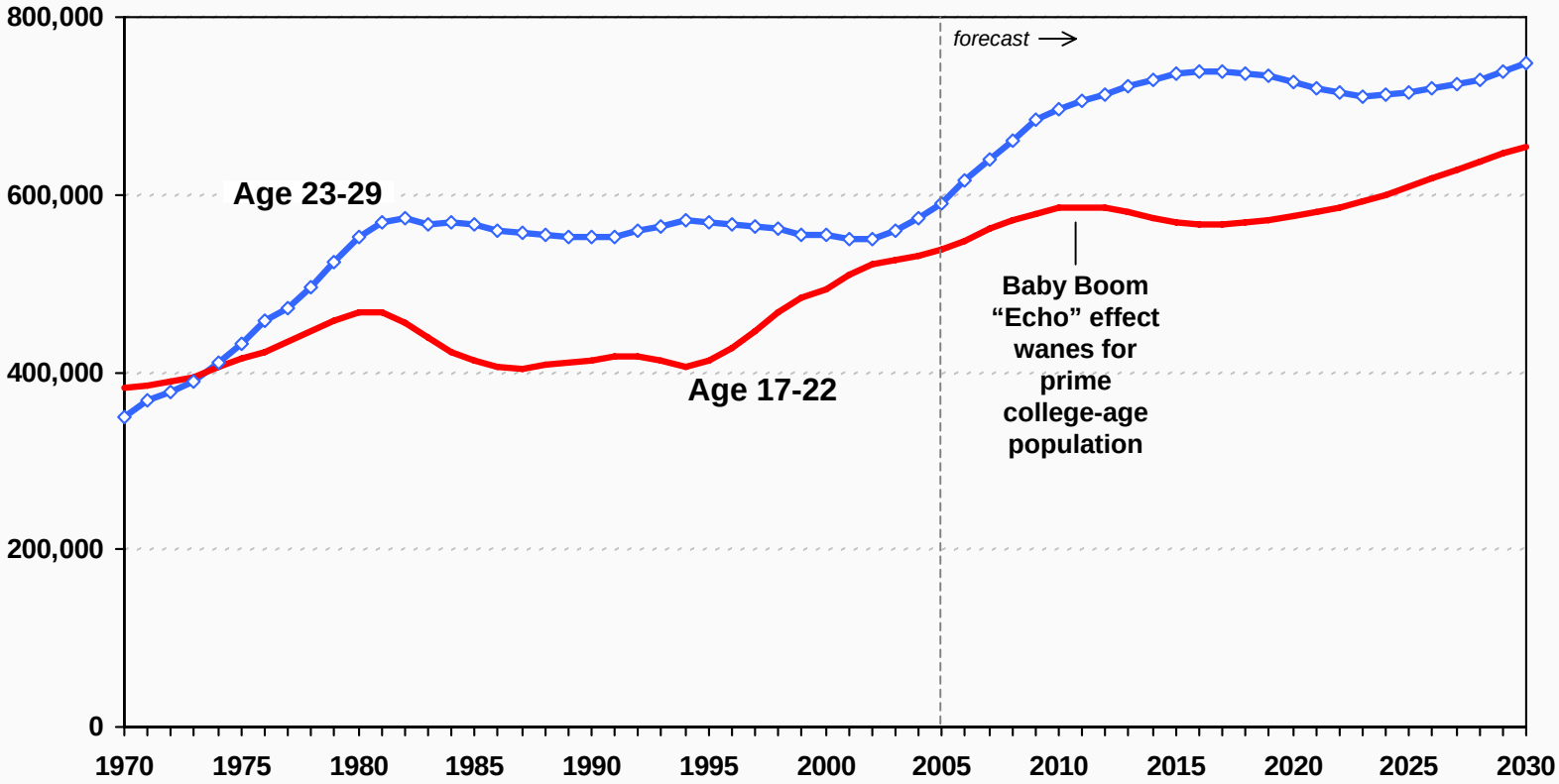


Sources: State Board for Community and Technical Colleges and U.S. Census Bureau and OFM (population).

Participation rates for the Community and Technical College system are based on annual average FTE enrollment.

Prime College-Age Population Trends

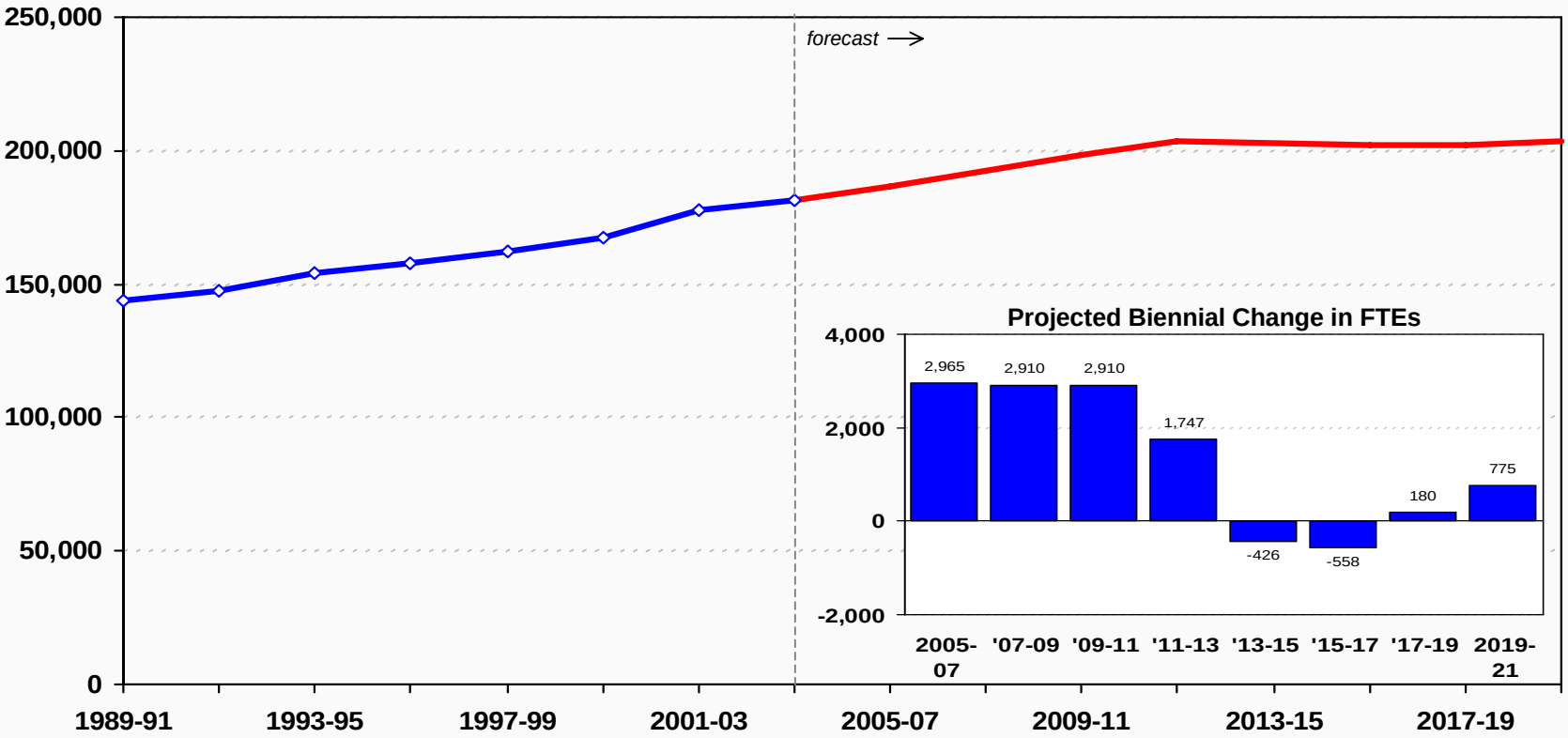
- Between 2005 and 2030, the number of 17- to 22-year-olds will rise by 115,500.
- Those in the 23- to 29-year-old age group will increase by 158,000.



Source: OFM Forecast of the State Population. http://www.ofm.wa.gov/pop/stfc/

Four-Year Institutions: Enrollment Projection Based on Fall 2004 Participation Rates

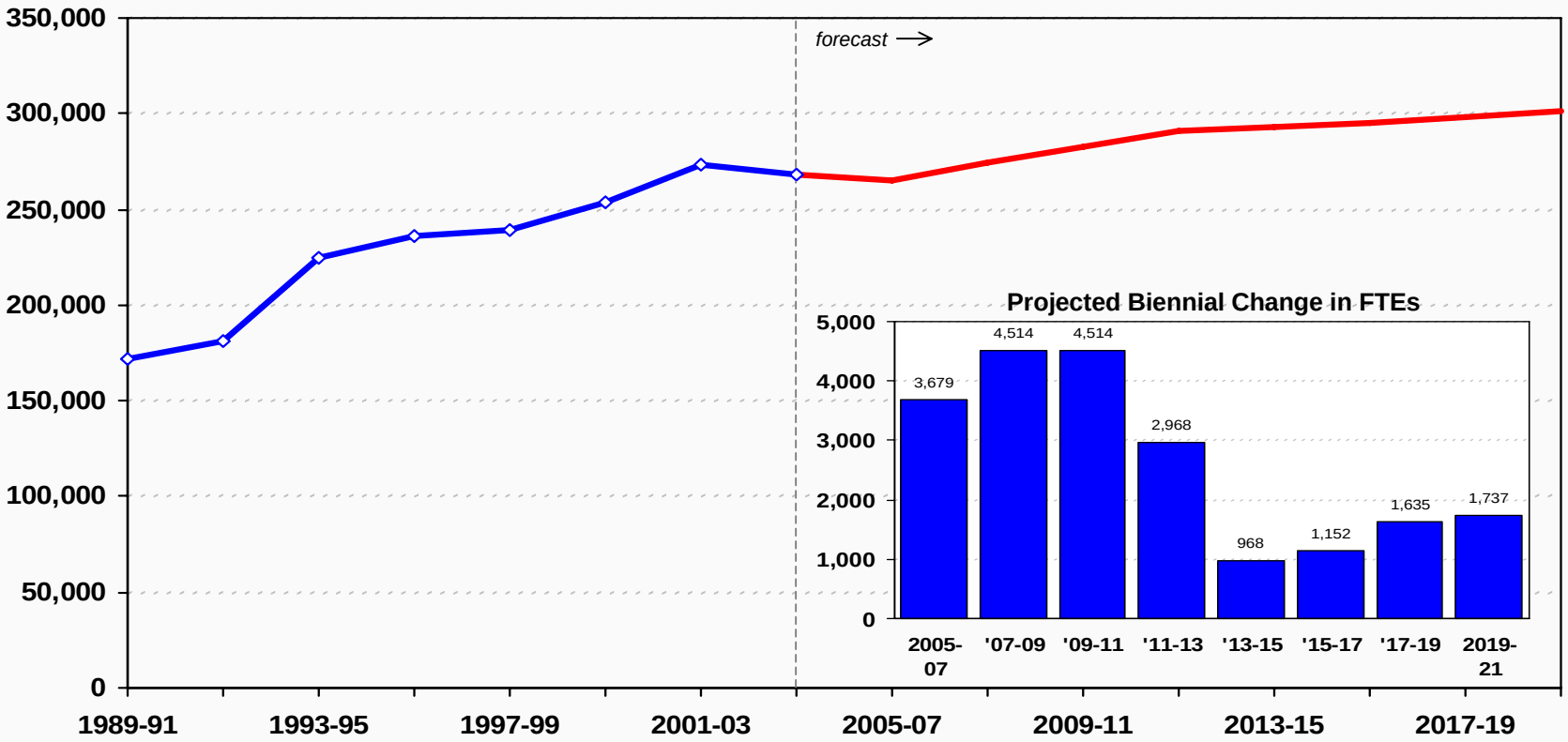
- If current participation rates were maintained, the four-year institutions would require enrollment increases of over 1,300 FTEs per year (or 2,600 FTEs on a biennial basis) through the 2011-13 Biennium.



Source: OFM November 2004 Public Higher Education Enrollment Projections. http://www.ofm.wa.gov/hied/proj/

Two-Year Institutions: Enrollment Projection Based on Fall 2004 Participation Rates

If current participation rates were maintained, the two-year institutions would require enrollment increases averaging nearly 4,000 FTEs per year (or 8,0 FTEs on a biennial basis) through the 2011-13 Biennium.



Source: OFM November 2004 Public Higher Education Enrollment Projections. http://www.ofm.wa.gov/hied/proj/

Other Types of Enrollment Projections

Enrollment projections may also be based on:

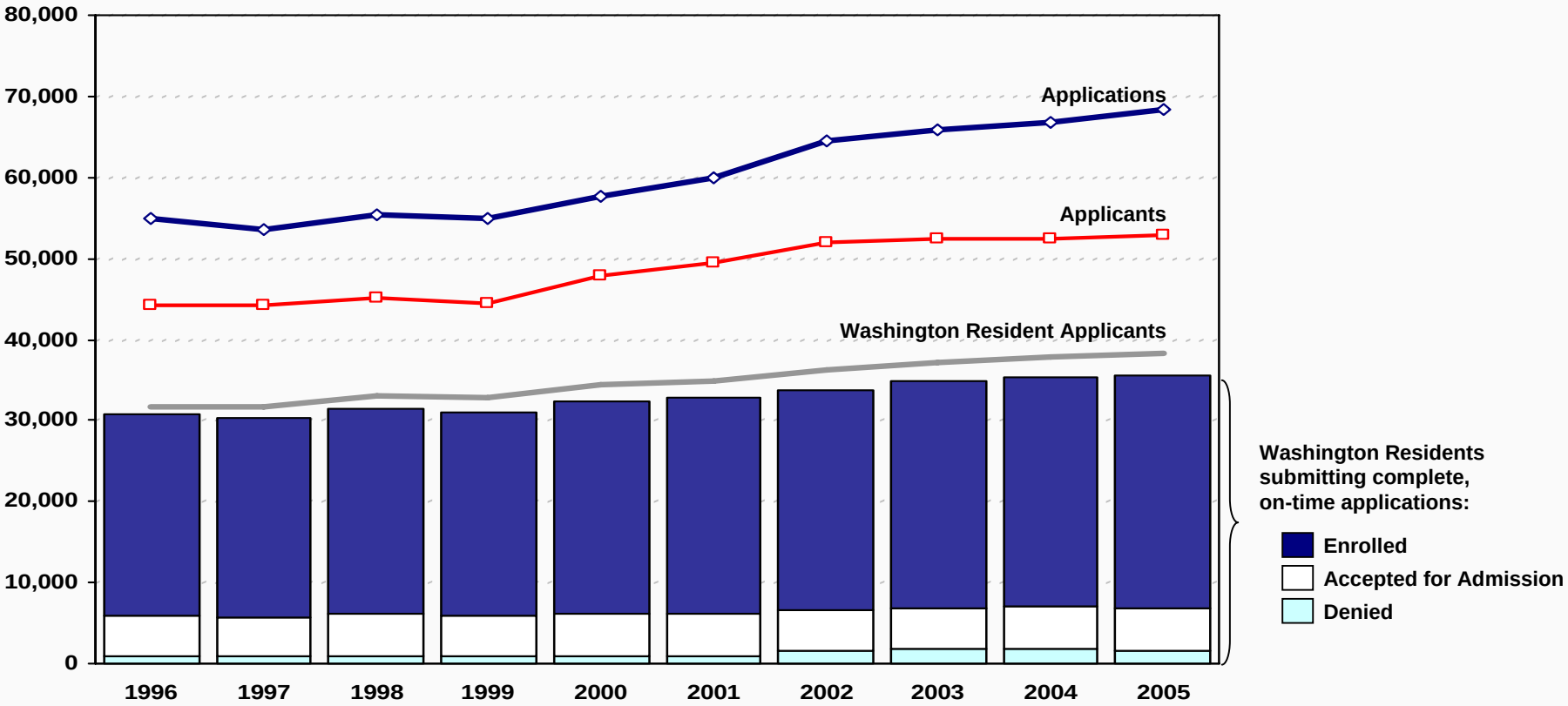
- Participation rate goals (e.g., the national average participation rate, the 70th percentile participation rate, etc.).
- Changing educational, skill, and occupational requirements.
- Changing needs and characteristics of the labor force.
- Changing needs of business and industry.
- State or community economic goals.

It is generally difficult to achieve consensus about the assumptions used in economic or labor market based enrollment projections. These types of projections are also more difficult to develop than those based on participation rates.

See: "Evaluation of Long-Term Higher Education Enrollment Forecasting," Office of Financial Management, January 1999. http://www.ofm.wa.gov/hied/longterm/

Undergraduate Applicants to Washington Public Four-Year Institutions

Fall Term



Source: OFM Higher Education Applications Match Study. http://www.ofm.wa.gov/hied/appmat/

What if ?

What would be the impact on participation rates and enrollment if the high school graduation rate increased by 5 percent? By 10 percent?

(A question posed by the Enrollment Subgroup)

Estimating the Effect of Increased H.S. Graduation Rate on Participation Rate

Three scenarios:

1. "Current" = Current participation rate
2. "+5%" = Participation rate if graduation rate increases from 74.3% to 79.3%
3. "+10%" = Participation rate if graduation rate increases from 74.3% to 84.3%

Assumptions

"Additional" high school graduates attend four-year institutions at current rates

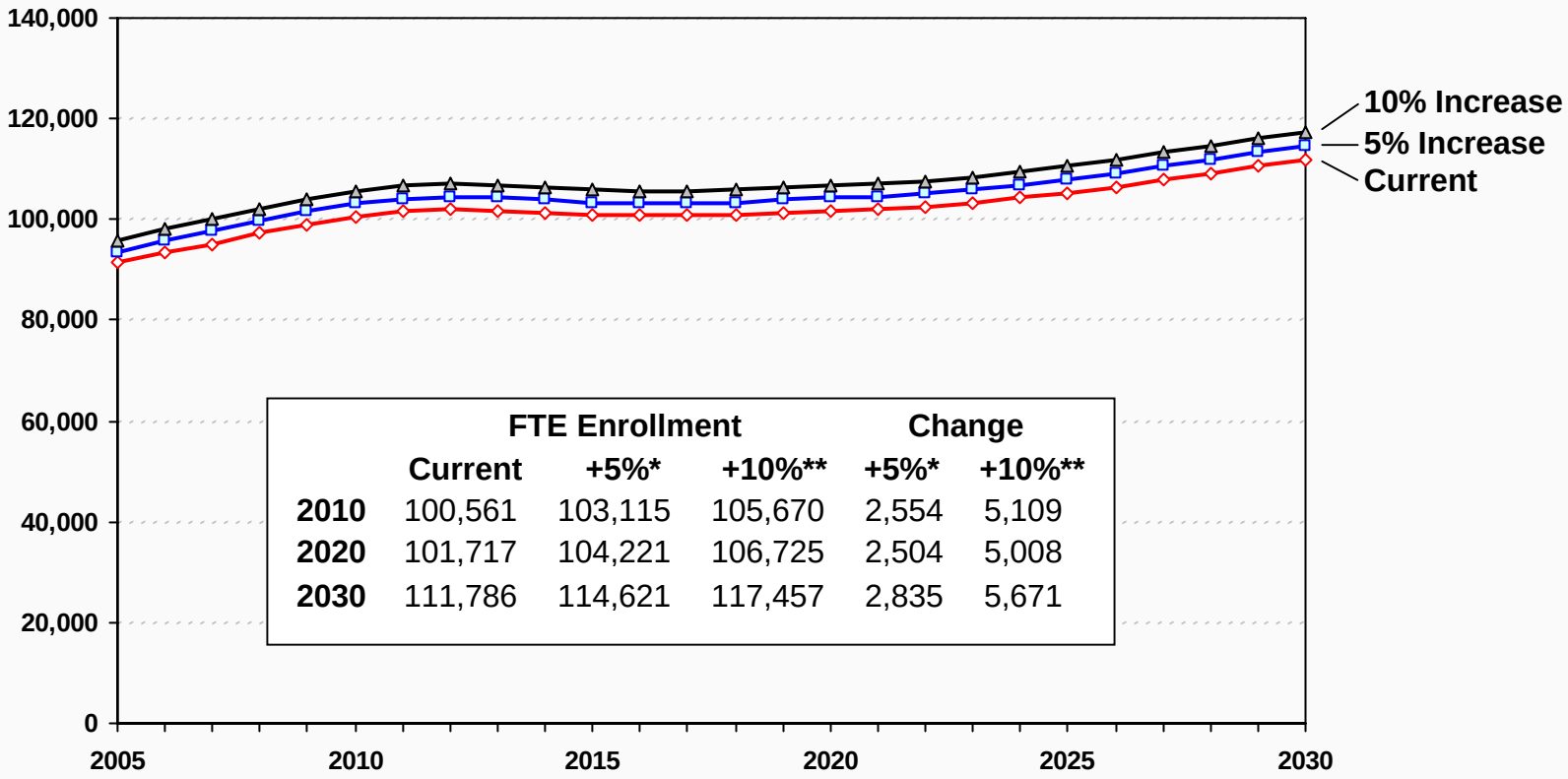
These "additional" entering freshmen persist from year to year at current rates

Details

- The 2004 public high school extended graduation rate was 74.3%.
- Increasing the public high school graduation rate from 74.3% to 79.3% yields approximately 4,100 potential entrants to public four-year institutions.
- Approximately 14.8% of high school graduates enter Washington public four-year institutions directly from high school.
- Once a student enters Washington public four-year institutions directly from high school, the persistence rate for the four subsequent years is approximately 85%.

Public Four-Year FTE Projections
3 Scenarios

Current Participation Rate, 5% and 10% Increases in Public High School Graduation Rates



	FTE Enrollment			Change	
	Current	+5%*	+10%**	+5%*	+10%**
2010	100,561	103,115	105,670	2,554	5,109
2020	101,717	104,221	106,725	2,504	5,008
2030	111,786	114,621	117,457	2,835	5,671

Current: Projection based on current participation rates

* Projection based on public high school graduation rate increase of 5% (from 74.3% to 79.3%)

** Projection based on public high school graduation rate increase of 10% (from 74.3% to 84.3%)

State Comparisons

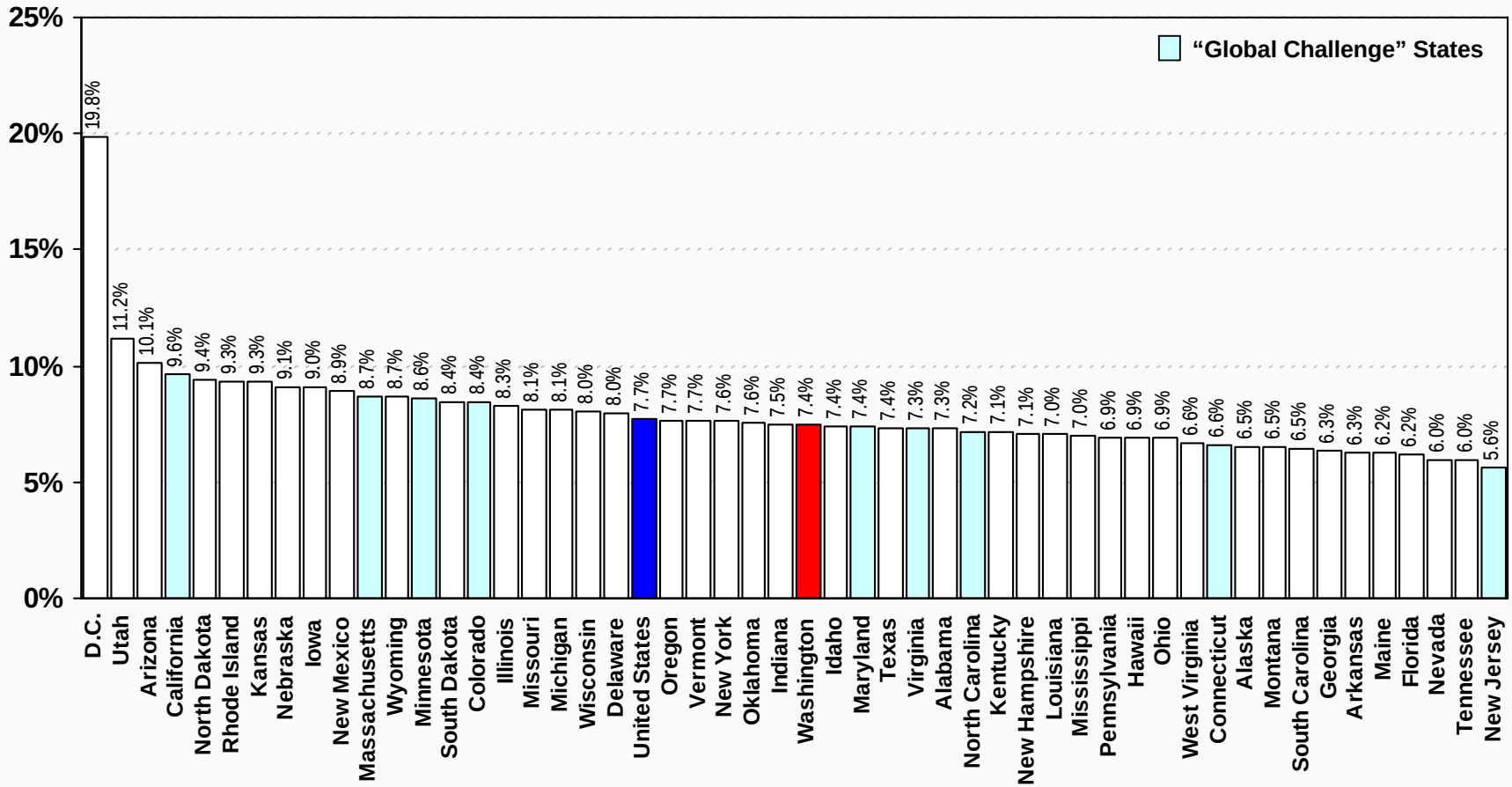
Participation Rates

Degrees Awarded

Educational Attainment

Total Participation Rates, Fall 2002

Related to Population Age 18 & Over

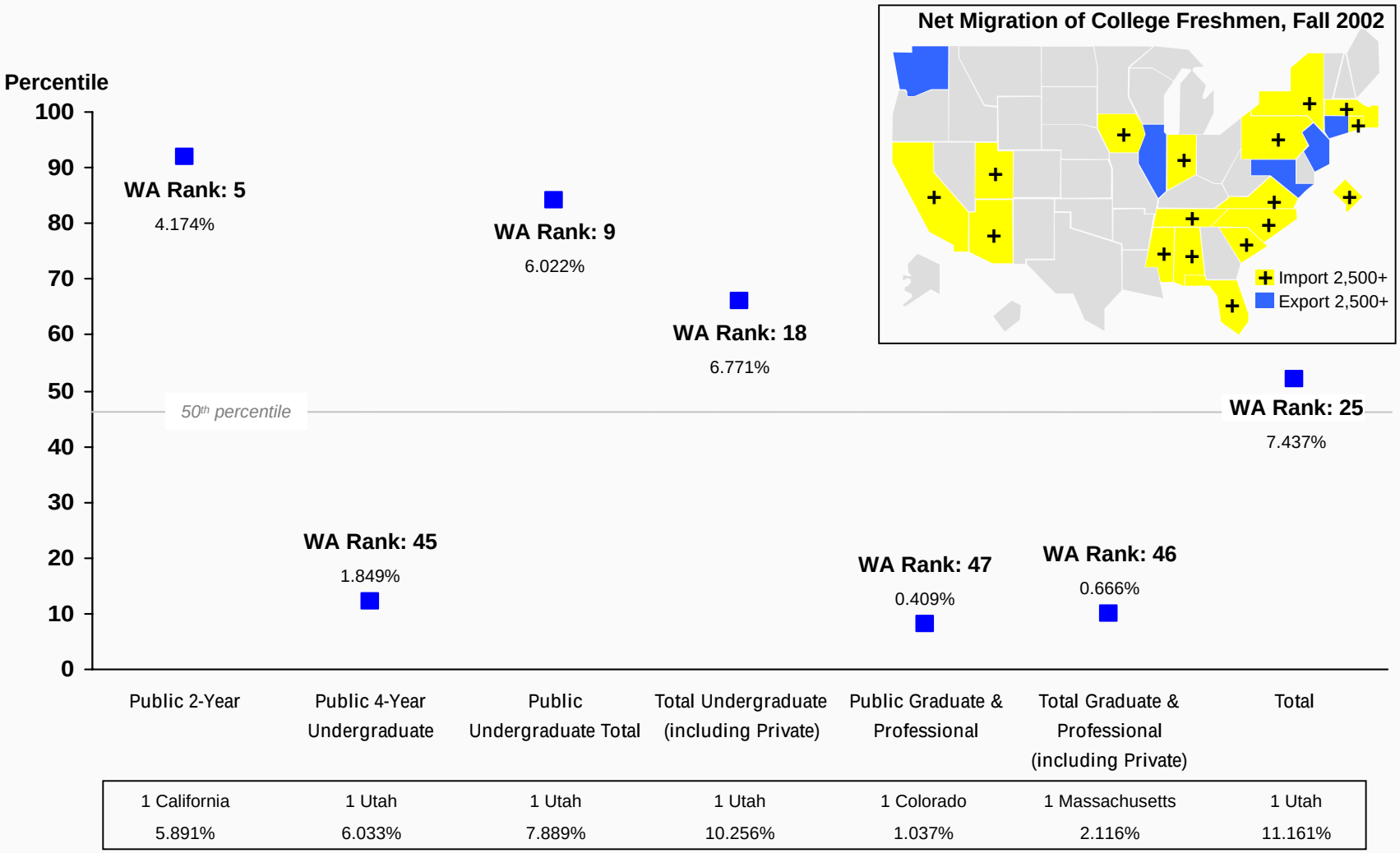


Source: NCES Digest of Education Statistics 2004, Table 198: Total fall enrollment in degree-granting institutions, by control, level of enrollment, type of institution, and state or jurisdiction: 2002. http://nces.ed.gov/programs/digest/d04/tables/dt04_198.asp; U.S. Census Bureau.

Participation Rate: State Rankings

Based on Fall 2002 Enrollment and Population 18 & over

Enrollments include students who are residents of other states plus foreign students.



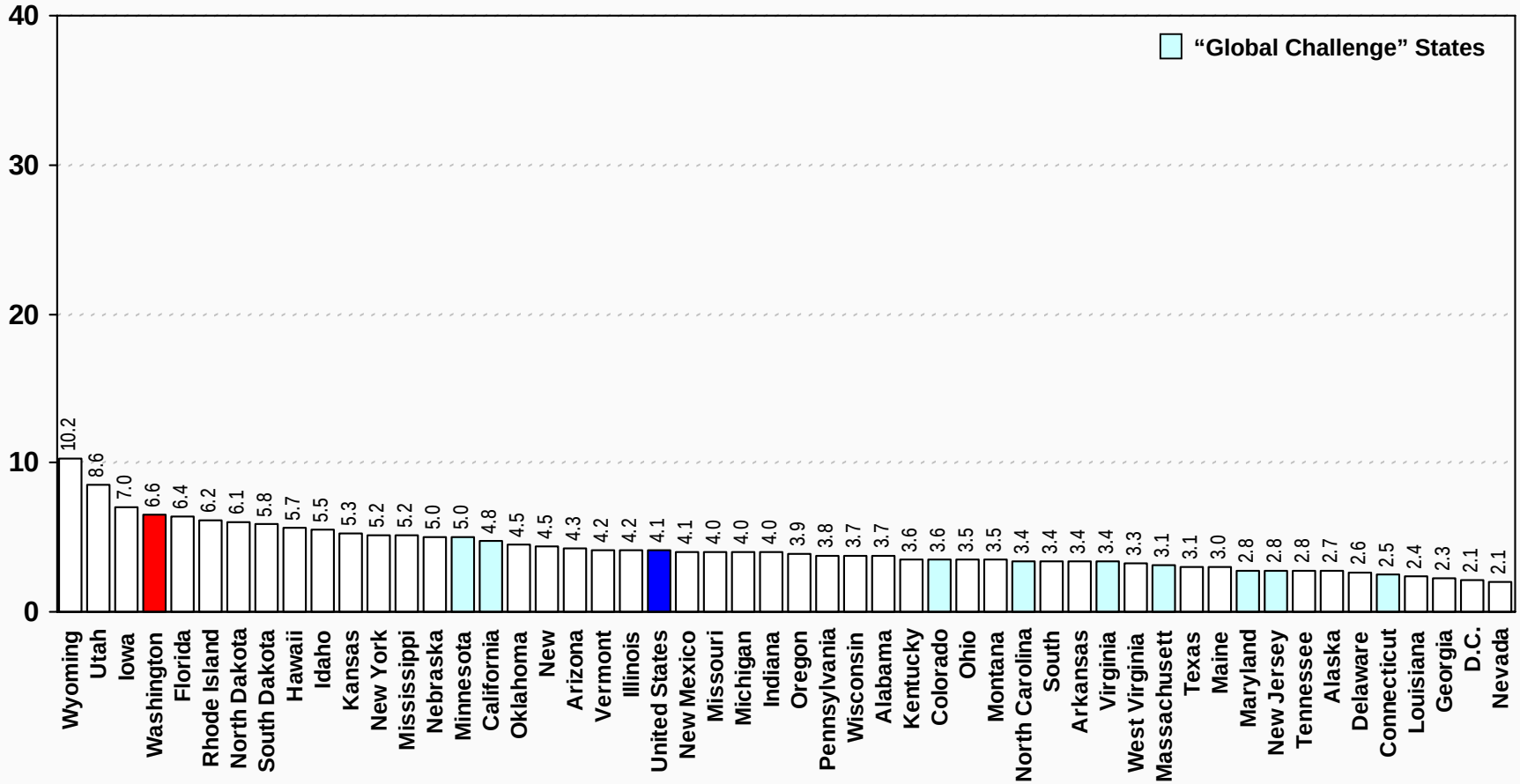
1 California	1 Utah	1 Utah	1 Utah	1 Colorado	1 Massachusetts	1 Utah
5.891%	6.033%	7.889%	10.256%	1.037%	2.116%	11.161%

Source: NCES Digest of Education Statistics 2004, Table 198: Total fall enrollment in degree-granting institutions, by control, level of enrollment, type of institution, and state or jurisdiction: 2002. http://nces.ed.gov/programs/digest/d04/tables/dt04_198.asp; U.S. Census Bureau.

Degrees Awarded

Associate's Degrees Awarded

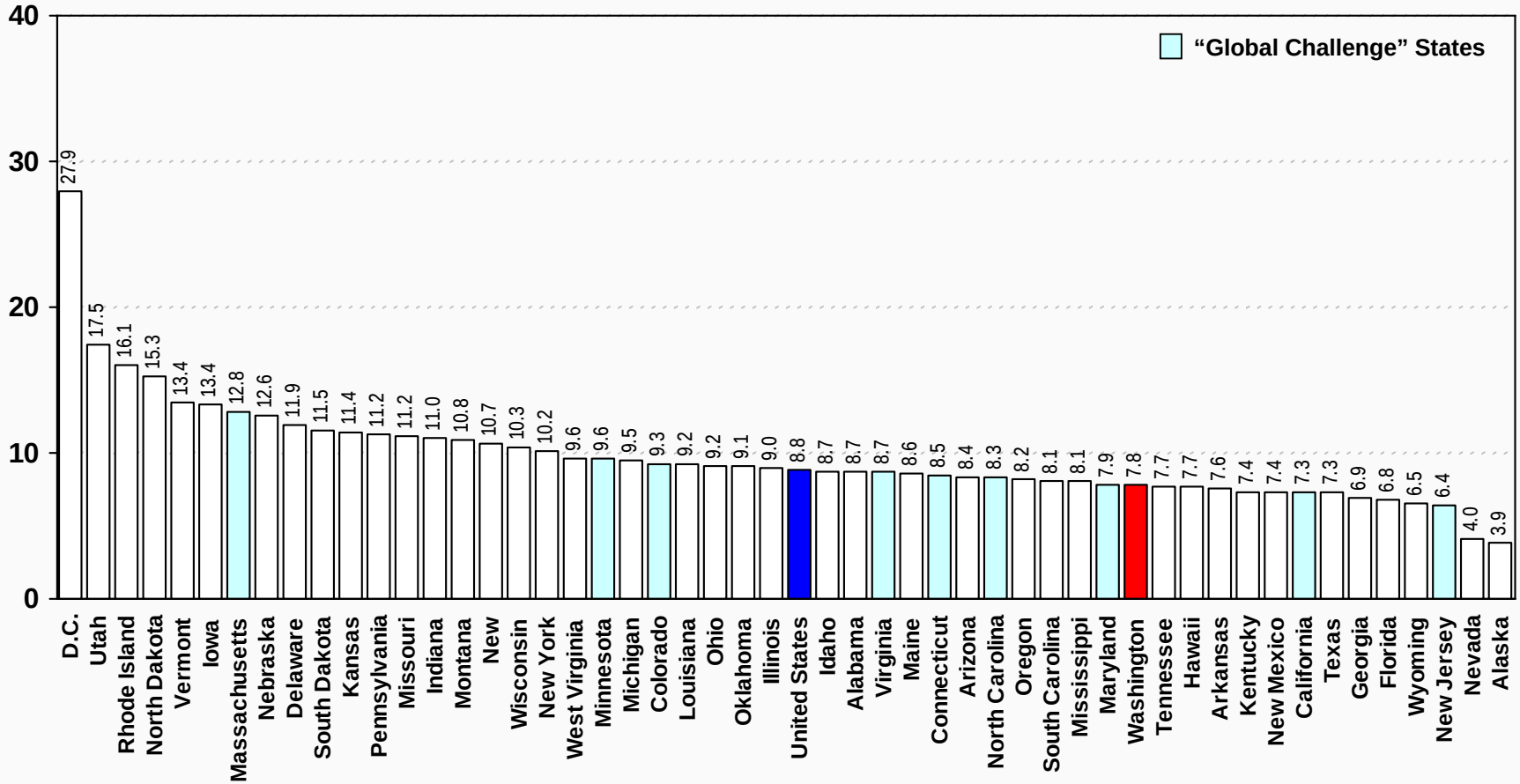
Per 1,000 Population Age 25-64



Source: NCES, Digest of Education Statistics 2004, Table 305: Earned degrees conferred by degree-granting institutions, by level of degree and state or jurisdiction. http://nces.ed.gov/programs/digest/d04/tables/dt04_305.asp; U.S. Census Bureau.

Bachelor's Degrees Awarded

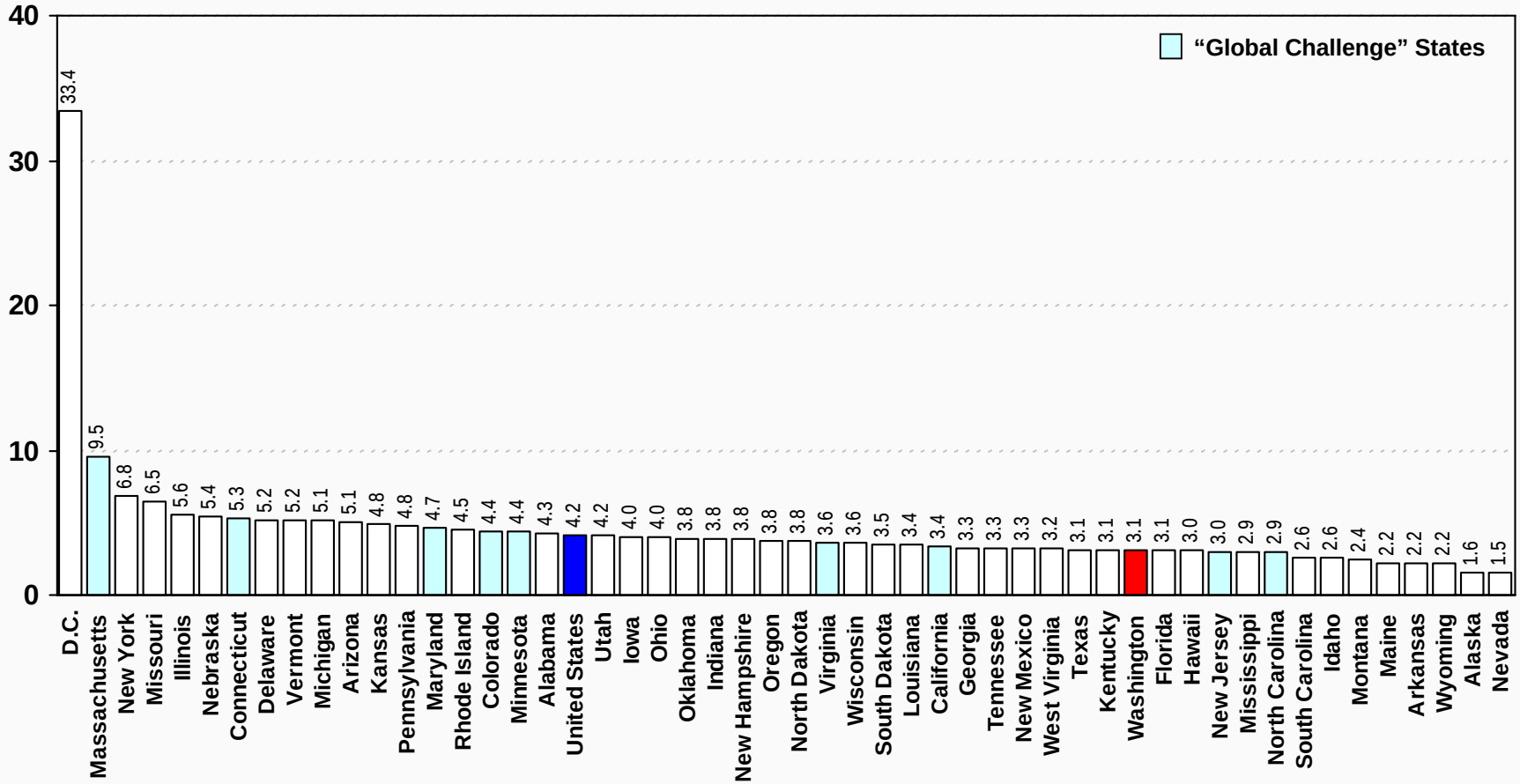
Per 1,000 Population Age 25-64



Source: NCES, Digest of Education Statistics 2004, Table 305: Earned degrees conferred by degree-granting institutions, by level of degree and state or jurisdiction. http://nces.ed.gov/programs/digest/d04/tables/dt04_305.asp; U.S. Census Bureau.

Graduate & Professional Degrees Awarded

Per 1,000 Population Age 25-64



Source: NCES, Digest of Education Statistics 2004, Table 305: Earned degrees conferred by degree-granting institutions, by level of degree and state or jurisdiction. http://nces.ed.gov/programs/digest/d04/tables/dt04_305.asp; U.S. Census Bureau.

Degrees Awarded by Discipline

Percent Change Between 1994-95 and 2004-05

Washington Public and Private Four-Year Institutions and the Community and Technical College System

Discipline	Associate		Baccalaureate	
	2004-05 Actuals	Percent Change	2004-05 Actuals	Percent Change
Business, Management, Marketing	1,465	0.9%	5,048	34.6%
Education	274	1,857.1%	1,613	-0.8%
Engineering & Engineering Technology	642	7.5%	1,347	-1.3%
Computer and Information Sciences	935	296.2%	943	315.4%
Health Professions & Related Clinical Sciences	2,317	40.9%	1,305	1.7%
Liberal Arts, Social Sciences, Humanities, General Studies	13,257	7.8%	11,928	32.4%
Science and Mathematics	432	332.0%	2,454	27.3%
Other	1,797	-4.0%	3,627	43.7%
Total	21,119	16.0%	28,265	30.2%

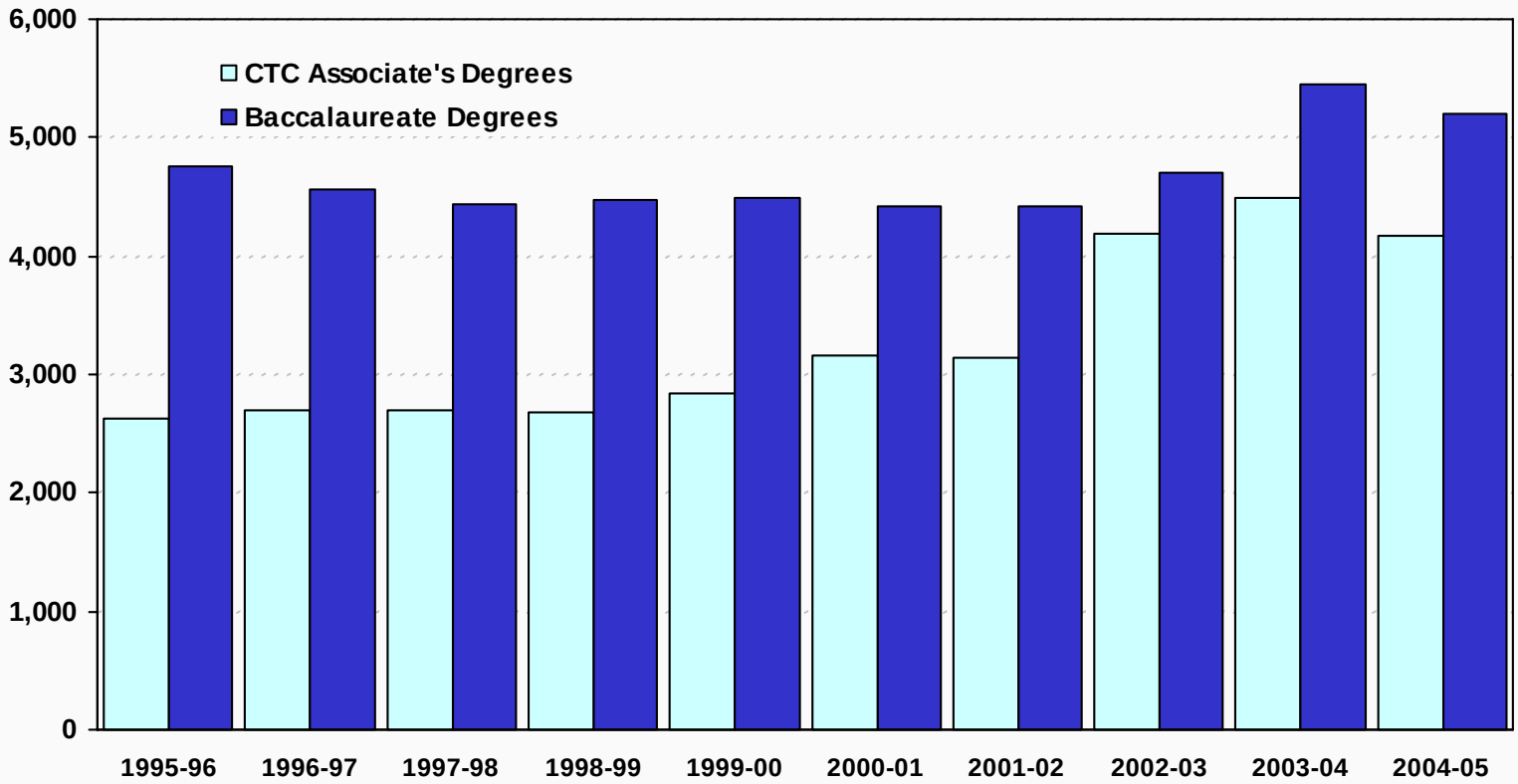
Data are presented by Classification of Instructional Programs (CIP) 2-digit series. Single 2-digit items are Business, Management, Marketing, and Related Support Services (52); Education (13); and Health Professions and Related Clinical Sciences (51). Engineering (14) and Engineering Technologies (15) are groups

"Liberal Arts, Social Sciences, Humanities" includes Area, Ethnic, Cultural, and Gender Studies (05); Foreign Languages, Literatures, and Linguistics (16); English Language and Literature (23); Liberal Arts and Sciences, General Studies and Humanities (23); Multi/Interdisciplinary Studies (30); Philosophy and Religious Studies (38); Psychology (42); Social Sciences (45); Visual and Performing Arts (50); and History (54).

"Science and Mathematics" includes Natural Resources and Conservation (03); Biological and Biomedical Sciences (26); Mathematics and Statistics (27); Physical Sciences (40); and Science Technologies/Technicians (41).

Degrees Awarded in "High-Demand" Fields*

Washington Public and Private Four-Year Institutions and the Community and Technical College System

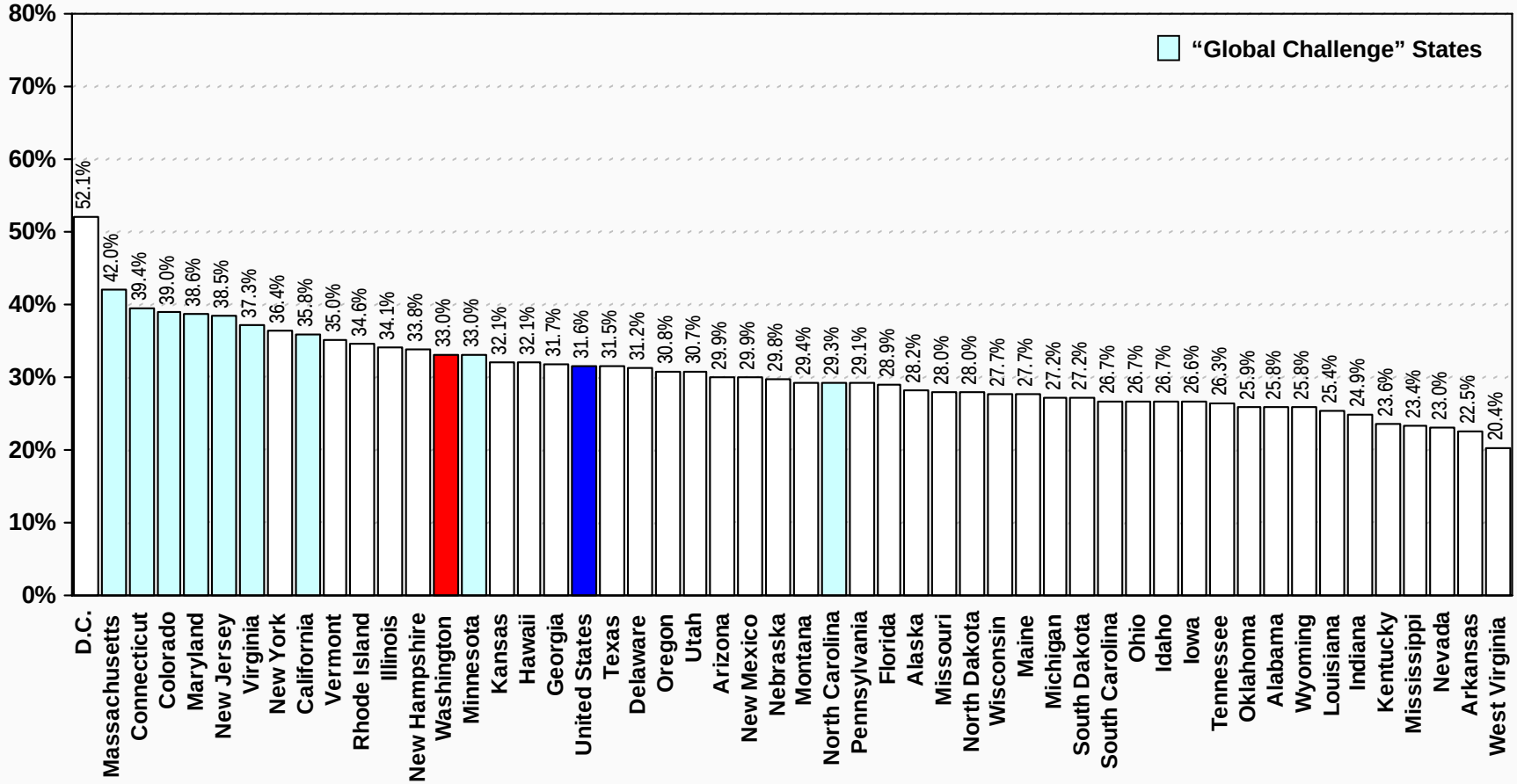


* Specific fields defined as "High Demand" vary from year to year, but generally include: Computer and Information Sciences, Education, Health, and Engineering and Related Technologies. Degrees awarded in these areas are shown here.

Source: National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS).

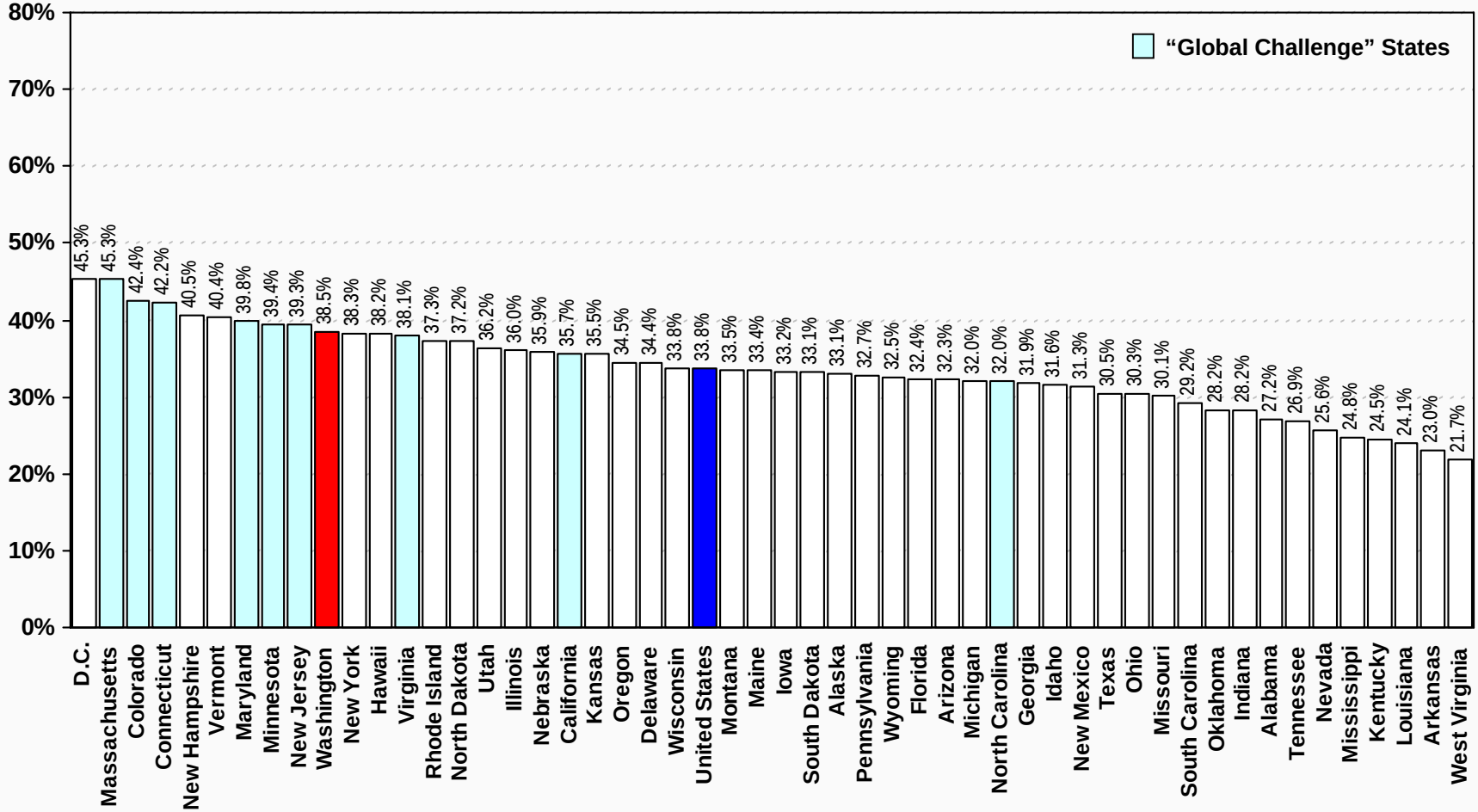
Educational Attainment

Population Age 25-64 With Bachelor's Degree or Higher



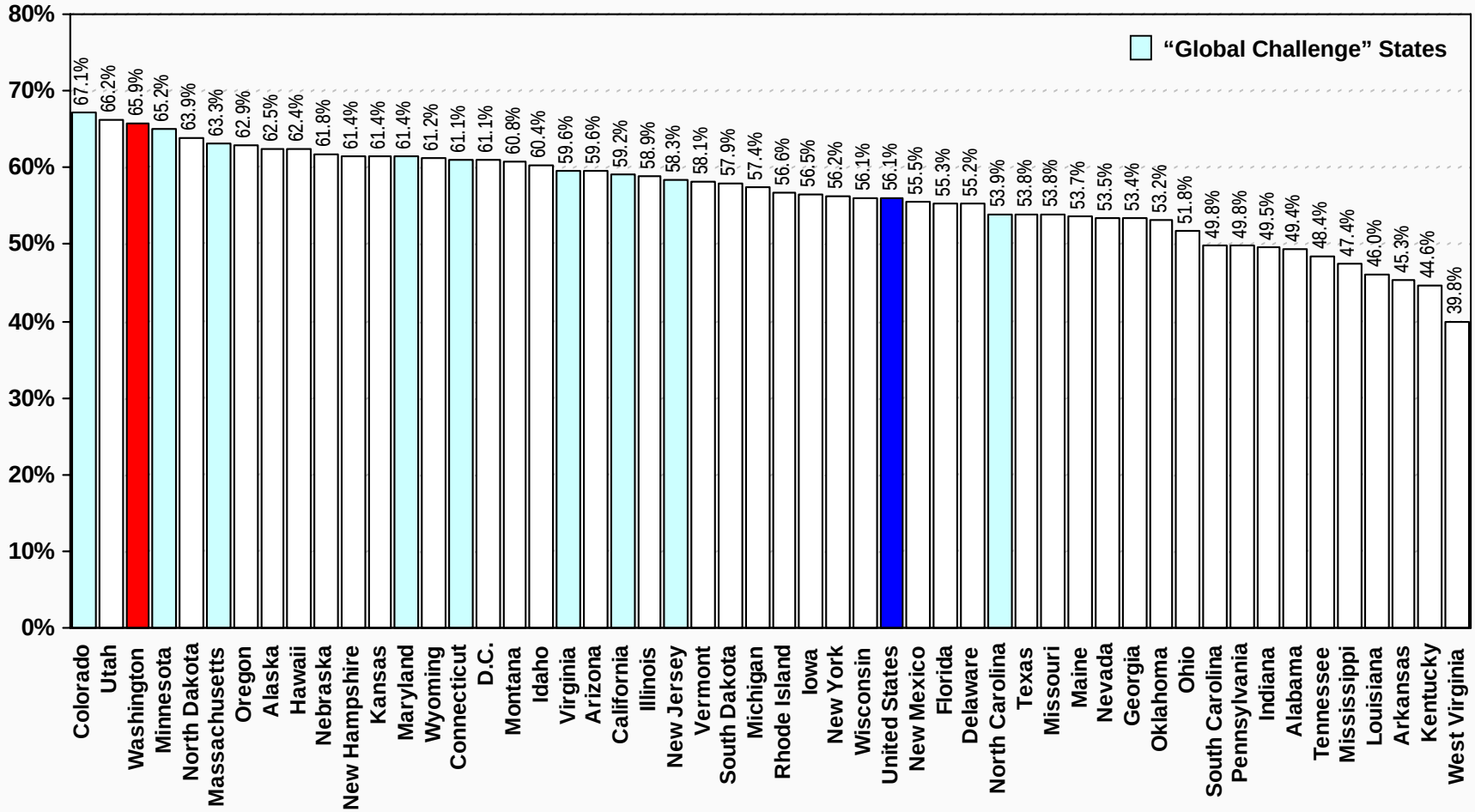
Source: U.S. Census Bureau, 2000.

Population Age 25-64 With Associate's Degree or Higher



Source: U.S. Census Bureau, 2000.

Population Age 25-64 With "Some College" or Higher



Source: U.S. Census Bureau, 2000.

www.ofm.wa.gov/forecasting/